

A Usability Study on the Paeloko Website

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Original site: sites.google.com/a/hawaii.edu/paeloko

Prototype 1: sites.google.com/a/hawaii.edu/paeloko2/about

Prototype 2: sites.google.com/a/hawaii.edu/paelokomaui

Prototype 3: sites.google.com/a/hawaii.edu/paeloko2017

Abstract : Frequent content update on a given website is a key factor to keeping users informed about an organization's mission. Paeloko, a place-based native Hawaiian organization, provides a hands-on learning environment, through indigenous ancestral arts, culture, and language at the exclusive Waihe‘e land division on the island of Maui. The original website for Paeloko’s lacked content appeal to aid potential educators interested in the educational medium Paeloko offers.

The purpose for this usability study is to improve the ease-of-use, user satisfaction and efficiency in aiding educators on the Paeloko website (<https://sites.google.com/a/hawaii.edu/paeloko2017/about>), built with Google Sites, an online collaborative website platform. Eight participants were included in two rounds of in-person and remote usability testing. Each session was both screened and audio recorded in order to obtain both qualitative and quantitative data through the thinking aloud process. Pre- and post-surveys collected quantitative and qualitative data, which included participant background information, demographics, and website use.

The suggestions and concerns by participants and executive director were improved upon completion of each round. Improvements included revising the homepage and logo, organizing the layout, changing a resource link name, reducing white space, and creating sub-pages for specific audiences.

Introduction

On the island of Maui, Paeloko is located in Waihe‘e Valley. Paeloko is a place-based, Native Hawaiian non-profit organization, a division of Kauahea Incorporated and Piko A‘o, who both provide a hands-on learning environment through indigenous ancestral arts, culture, and language to the Maui community (Hedani & Ishikawa, 2015). Upon

arrival, visitors are greeted by Lorilei Ishikawa — a revered *kapa* (traditional cloth) practitioner, co-owner, and Paeloko's executive director.

On the island of Maui, the location *Paeloko* is most noted for the accounted *mo'olelo* (story) about the demi-god Maui, who was the son of Hina — a master *kapa* maker. In Maui's heroic determination to help his mom, he collected and gathered coconut husks to create a strong cord to lasso the sun and slow its movement across the sky. The longer daylight hours provided more daylight time for his mom to dry her *kapa* (Beckwith, 2016). Traditionally, *kapa* was utilized as a necessity to sustain families in their daily lives and activities. Paeloko's location correlates with stories about the area told by *nā kupuna* (elders) and well-referenced historian authors Zepherin "Kepelino" Kahō'āli'i Keauokalani and Martha Beckwith. In binding the history to the location, the art of *kapa* is among one of the focused educational activities at the site.

As a current advocate, I have volunteered as a *kōkua* (volunteer) at Paeloko and learned that perpetuating the culture and fostering the community was the main drive for this organization's sustainability as a non-profit entity. My experiences on-site include *malama 'āina* (caring for the land) activities; maintaining the plumeria patch; assist on community work days with clearing *'auwai* (water paths); assist in clearing *lo'i kalo* (taro patch); mentoring under the executive director in assisting individuals attending programs serving PK-12 students, higher education, community organizations; and assisting with professional development workshops. I have been inspired to practice, learn, and incorporate indigenous ancestral arts and values into my lifestyle, as well as support this organization with their mission.

Upon interest by the executive director, I chose to conduct this usability study on a newly created website for the organization to improve content with today's best practices in website development. The existing website, developed in 2015, was accessible through a link via Paeloko's Facebook, social media site. However, due to limited funding and staff, the existing website lacked content appeal, organization, and ease-of-use to aid educators. The purpose for this usability study was to improve the ease-of-use, user satisfaction, and efficiency in aiding educators on the Paeloko website.

Literature Review

Usability Studies

The purpose of a usability study is to better a website with the intention of: 1) making it easier for people to use or; 2) proving that it is easy to use (Krug, 2010). This process includes multiple iterations before reaching a completed site. Usability is a way to tweak and possibly to take something away for the betterment of the website. A principle practice implemented in my study was to remove irrelevant and disorganized content and remove unwanted whitespace (Krug, 2010). For quantitative data, the success rate for a task and measuring time on task was recorded, providing results to measure the efficiency of the site (Krug, 2010). For qualitative data, Krug encourage thinking aloud methods

during the study, which records and observes the participants narration of their screen activity and audio. Krug's principles were applied to pre- and post-surveys. After each round, suggestions to improve the website's design were applied (2010).

Krug's perspective aims for minimal change to a site, whereby it can be maximized to benefit the user's experience. Krug (2014) stated, "If we are going to fix, we want to do it right." This statement reflects not only perfecting the sites visual appeal, but especially improvement for ease of use. Participants were given four tasks and were evaluated for their time on each task. The evaluated results of both the observations and success rate proved that the improvements to the site aided in making it simple and easy to use. A logical sequence was designed within each task: 1) pass or fail to reach intended destination 2) complete with at least three mouse clicks (Zendall, 2001). Haile reaffirms how the allotted time for users on a web page is about fifteen seconds (Haile, 2014). With users' short span of interest, creating a pathway for destination is key to website design.

Expert web usability consultant Jakob Nielsen defined usability as a quality attribute that assesses how easy user interfaces are to use (Nielsen, *Usability 101*). The word "usability" also refers to his research methods for improving ease-of-use during the design process (Nielsen, 2012a). Areas that work collaboratively to formulate an efficient user friendly website are learnability, efficiency, memorability, errors, and satisfaction. Nielsen encourages that these areas are optimum as we search for qualitative data because it provides the researcher with a maximum benefit-cost ratio (Nielsen, 2012c). Nielsen affirms to thinking aloud methods have been in use for use for over nineteen years, a cheap and accurate way to measure usability (Nielsen, 2012b).

Visual Design Principles

Measures to improve web design included adding archived and curated photos and videos from stakeholders and social websites. Fulford's (2014b) strategy included incorporating photos to aid learning for users. Photo and video content on a website can illustrate the educational programs that include values of *malama 'āina* (caring for the land) activities including clearing *'auwai* (water paths), clearing of *lo 'i kalo* or learning about the art of *kapa* (traditional cloth).

Visual design techniques can also create rhythm, motivation and readability with insight on color, emphasis and simplicity towards the design (Fulford's (2014a); (2014b). In addition, to simplify the site, I decided to add an education tab and eliminate irrelevant tabs. Krug (2009) affirms that visual hierarchy is an important way to grasp the audience and enhance what is very important. Both concepts were used in revisions to improve ease-of-use for users.

Today's art organizations use the internet and technology tools to create awareness, promote events, and exhibit their mission (comScore, 2012; Mershon, 2016; Thomson, Purcell & Rainie, 2013). Art organizations were surveyed by Pew Research regarding their preferred areas of promotion. These areas included: posting photos (94%), post or

stream video (81%), and 57% audio (Thomson, Purcell, & Rainie, 2013). Respectively, photos, videos, and current events were included for improving the website for user satisfaction.

Project Design

To align strategies with the current site and meet stakeholder recommendations, the website prototypes were created with the online collaborative website platform, Google Sites. This web design tool was chosen because it is the current website tool used by the organization and the examples offered in this study would be considered for potential implementation. The website offered simple ways to build and to add photos and video with Google Applications. Limitations in building the website prototypes were: 1) researcher's knowledge of HTML codes, 2) restricted image and video layout options, and 3) challenges in the placement of various headers and footers.

The first website for Paeloko was developed in 2015 in an F Format (See Figure 1, Item A). Since inception, the first website has been live on the social media website, Facebook, but with no major improvements. The site included incomplete and black pages which lacked photos, videos and content (See Figure 1, Item C).

As a volunteer and advocate for Paeloko's mission, I chose to task myself with the opportunity to improve the website. Talking with the executive director, and other main stakeholders, peers and participants about the potential improvements, recommendations were noted. The main recommended areas were as follows: 1) adding photos, 2) adding videos, 3) organizing content, and 4) adding current events.



Figure 1. Original Site with F Format

In the final prototype (See Figure 2), the website was designed to be simple. To improve visual design upon landing, the original logo in the center was used to brand the site to the user (See Figure 2, Item A). The decision to try a the original logo as a focal point on the landing page in round two was based on participant's negative feedback in round one and the positive feedback from participants in round two. The amount of information included on the *About page* was limited to make navigation upon landing on the homepage easier for users to view key areas (See Figure 2, Item B). The menu bar in the middle allowed participants to navigate to any page during their exploration (See Figure 2, Item C). A photo reel and video were also added to aid users about the site and activities (See Figure 2, Item D).

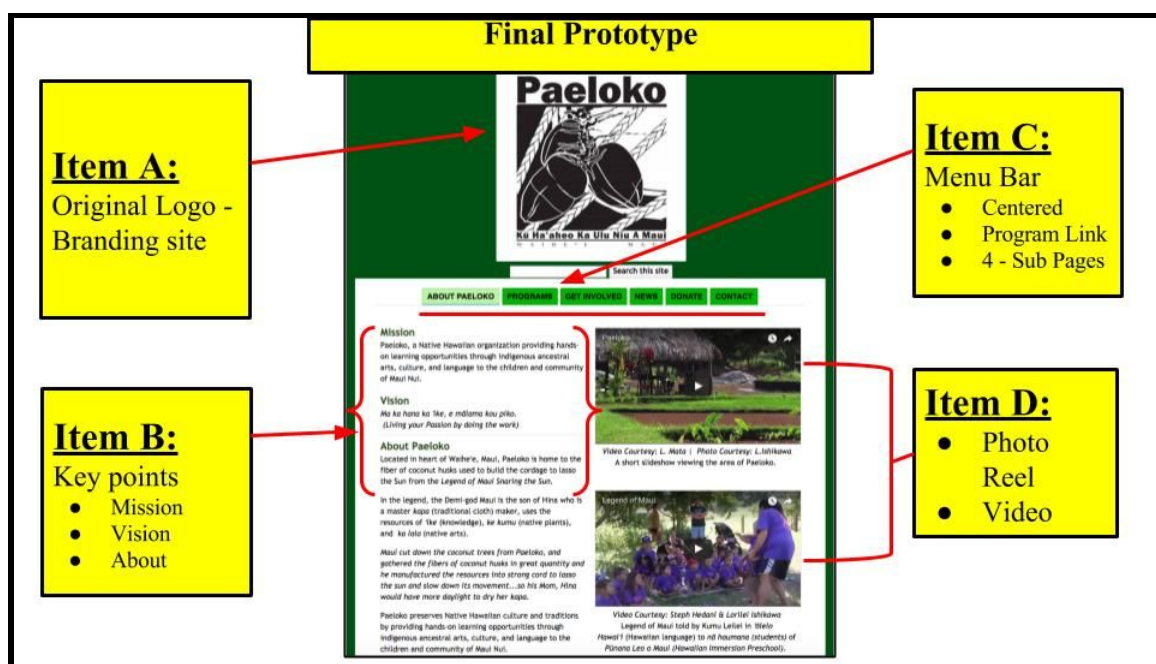


Figure 2. Final Homepage Prototype with Adjustments

Methodology

Participants

Eleven potential participants were pre-selected and contacted by email; eight participants volunteered to participate in this usability study. Participants were identified as users who could relate to the usability scenario (See Appendix F) and have subject-matter expertise in one or more of the following areas: 1) Native Hawaiian culture, 2) culture (other), 3) education, 4) technology. Having various areas of expertise provided some familiarity about the topic as a user.

Two rounds of usability testing were conducted with four participants in each round that occurred in late January 2017 through February 2017. Two sessions were completed remotely via Google Hangouts on Air and six were conducted in-person at a conference

room located at the University of Hawai'i Maui College campus. A total of eight participants were used, which included one male and seven females, age range of 25-55+ years old, and all earned a higher educational degree (See Table 1).

Table 1.

Background information on usability study participants

Participant	Round	Age	Background	Online course taken	Hours per week internet
1	1	55+	Native Hawaiian Culture, Culture, Education, Technology	1	40
2	1	35-44	Native Hawaiian Culture, Culture, Education, Technology	20	30
3	1	35-44	Native Hawaiian Culture, Culture, Education, Technology	5	30
4	1	55+	Native Hawaiian Culture, Culture, Education	6	24
5	2	25-34	Native Hawaiian Culture, Culture, Education	5	40
6	2	45-54	Native Hawaiian Culture, Culture, Education, Technology	0	38
7	2	45-54	Native Hawaiian Culture, Culture, Education, Technology	18	30
8	2	55+	Culture, Education, Technology	10	40

Research Questions

To improve the ease-of-use of the original Paeloko website, a usability study was conducted to evaluate the website as intended for educators to explore (Krug, 2010). The research questions developed for this study were: 1) how easy or difficult is it for educators to navigate and find out about the current programs offered at the site?, and 2) how satisfied are educators with the photo and video content?

Procedures

Participants were contacted via email with the Participant Recruitment email (See [Appendix A](#)) that requested their voluntary participation in this study. The email included a Participant Survey (See [Appendix B](#)) link, created using a Google Form which asked for their preferences to availability and contact information.

Participants were required to agree with terms and sign an Informed Consent (See

[Appendix C](#)). The consent form contained an overview of the study session, the participants confidentiality, rights, benefits and expectations during the duration of the study. For remote sessions, a technology instruction sheet was provided to two participants as a guide (See [Appendix D](#)). Upon agreement to participate, a confirmation email (See [Appendix E](#)) was sent to confirm date, time, and location. Informed Consents were returned by participants via email for remote-sessions, and all in-person sessions were signed prior to each session. To protect the identity and data collected, all recordings were saved as a private file. Data collected online was password protected on a computer, all of which will be destroyed and deleted at the completion of this study.

All participants in the study were guided by a usability protocol script. (See [Appendix F](#)) Methods based on Steve Krug's *Rocket Surgery Made Easy* were modified and implemented in this usability study. Qualitative and quantitative data was collected using the free Google Application Forms. Each usability session began with a Pre-Survey See ([Appendix G](#)) and ended with Post-Survey (See [Appendix H](#)), which included short-answer questions, multiple choice questions, and Likert-Scale questions. Data was automatically collected, organized, and uploaded to Google Sheets and Microsoft Excel.

The pre-survey was used to measure background demographics and website use in regards to the participants. Results of the participants illustrated internet use between 24-40 hours per week, offering experience and familiarity with websites. At the end of each session, a post- survey and a short interview was also conducted.

For the first part of the usability session, the first task requested feedback from the participant's first impression on the homepage design. Next, participants were asked to think aloud as they navigated the Paeloko website with presented scenarios and tasks. Audio and screen activity were recorded with Google Hangouts via YouTube Live on Air. The data collected from usability allows us to watch how participants used the site and how the framework of website can be designed (Krug, 2010).

Data collected was used to identify the most apparent problems. Revisions were made after each round, based on the suggestions, observations and occurrences the participants experienced.

Results

The original site improvements were made based on stakeholder's suggestions, peers, and professional users (See Figure 3). The outcome of the improvements were evaluated based on participants during each round on ease-of-use, user satisfaction, and efficiency.



Figure 3. Original Website with Priority Improvements

Visual Design

Three participants from round one reacted significantly to the prototype homepage appearance. Participants voiced their concerns quickly, requesting that visual clutter be decreased in the following areas (See Figure 4): 1) use “one” solid photo with no “overlapping” (Figure 4, Item A), 2) the search button was not visible or “seen” (See Figure 4, Item B), 3) expand sub-pages for easier navigation for PK-12 (See Figure 4, Item C), and 4) use the Paeloko logo design.

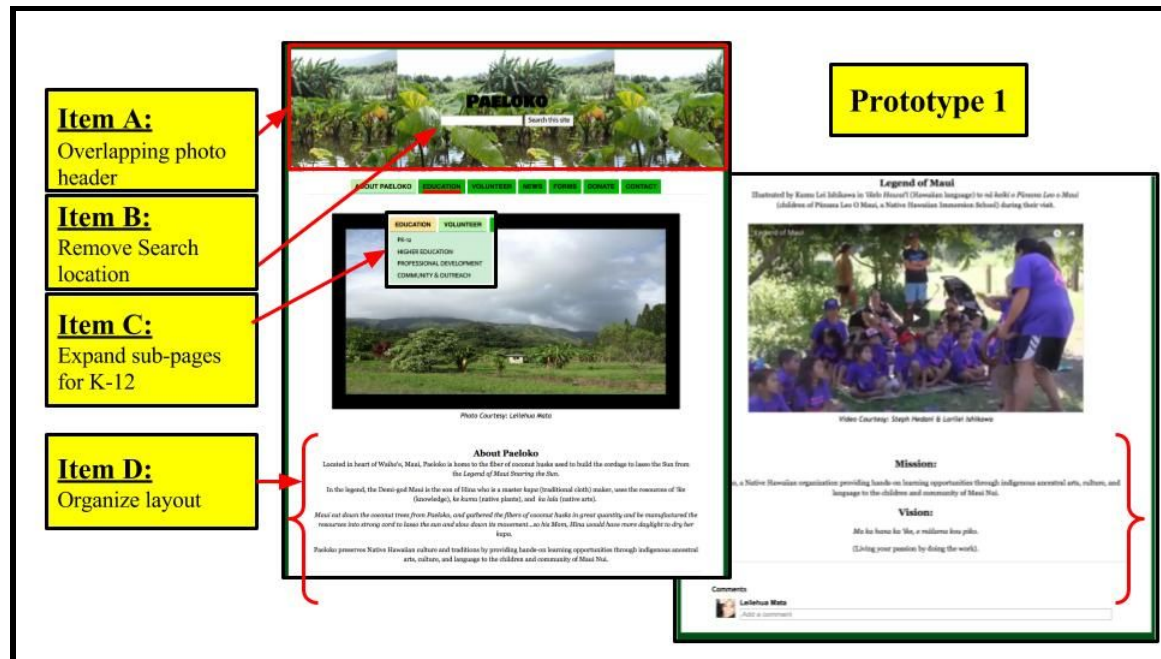


Figure 4. Round one recommended improvements for homepage - prototype 1

The final prototype of the homepage design was improved to increase motivation and avoid visual clutter (See Figure 5). Most participants showed interest in the logo, and asked for ‘meaning’ of the logo as it caught their attention. For the the final website, the following updates and observations were made: 1) positive feedback from participants with the Paeloko Logo (See Figure 5, Item A), 2) the change name to ‘education’ tab was successful during navigation in round two with no questions (See Figure 5, Item B) 3) centered header placement for a visible search button (See Figure 5 , Item C), 4) keep the two column layout for the *About page* with key points (See Figure 5, Item D), and 5) participants engaged with with photo reel and video in round two. Collectively, these items improved user satisfaction and ease-of-use upon landing upon the homepage.

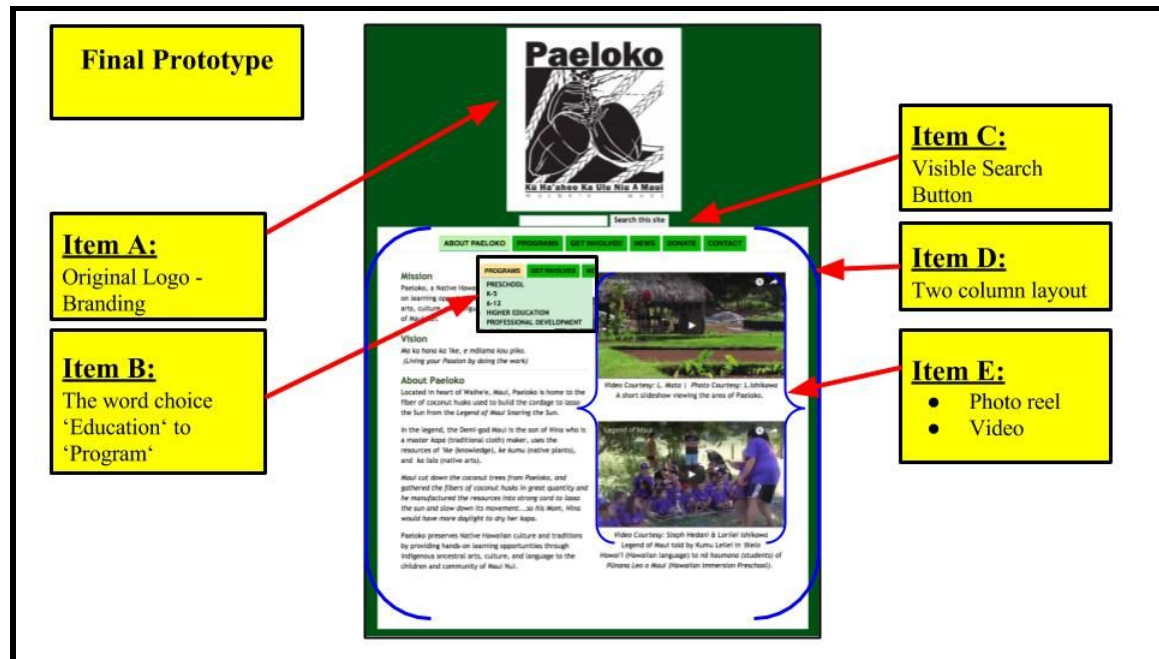


Figure 5. Final homepage prototype with improvements based on feedback

Table 2 displays average (means) scores with a clear increase on user feedback in eleven of the fifteen areas in comparison from round one to two. The most pertinent was question two and ten with an increase of five-hundredths. Both correlates to changes made to visual design and logic of website improvements from round one.

Table 2

The mean average of post-survey results from round one and two with increased value

Question	Round 1	Round 2	Increase
1. The homepage layout was easy to understand.	4.5	4.5	0
2. The website is visually appealing.	4	4.5	0.5
3. The photos have great quality.	4.25	5	0.75
4. The photos were sized very well.	4.25	4.5	0.25
5. The videos were sized very well.	4.5	4.75	0.25
6. The videos had great quality.	4	4.5	0.5
7. The website is clear and organized.	4.25	4.5	0.25
8. The color schemes are appropriate.	4.5	4.5	0
9. The website is easy to navigate.	4.5	4.5	0
10. The pages were in logical order.	4.25	4.75	0.5

11. Number of buttons and links are reasonable.	4.5	4.75	0.25
12. The website is easy to use.	4.5	4.75	0.25
13. I can use this website without instructions.	4.75	5	0.25
14. The website is user friendly.	4.5	5	.5
15. Links are consistent and easy to use.	4.5	4.5	0

Increase in areas were in photos (question 3, 4), videos (5, 6), organization (question 7 and eleven), and ease-of-use (question twelve, thirteen, fourteen) (See Table 2).

Prior to the sessions, a Pre-Survey was completed. Figure 5 below lists the content preferences of the participants with most interests on websites. All eight participants noted that current events is most preferred on websites, followed by photos, video and resources (See Figure 5). This survey correlated to the Pew Research survey on arts organizations websites, measuring which content they (organizations) promoted. 87.5% (7) of the participants listed photos, comparatively to Pew Research survey that listed at 94% followed by the similar interest with video (75%) (Thomson, Purcell, & Rainie, 2013).

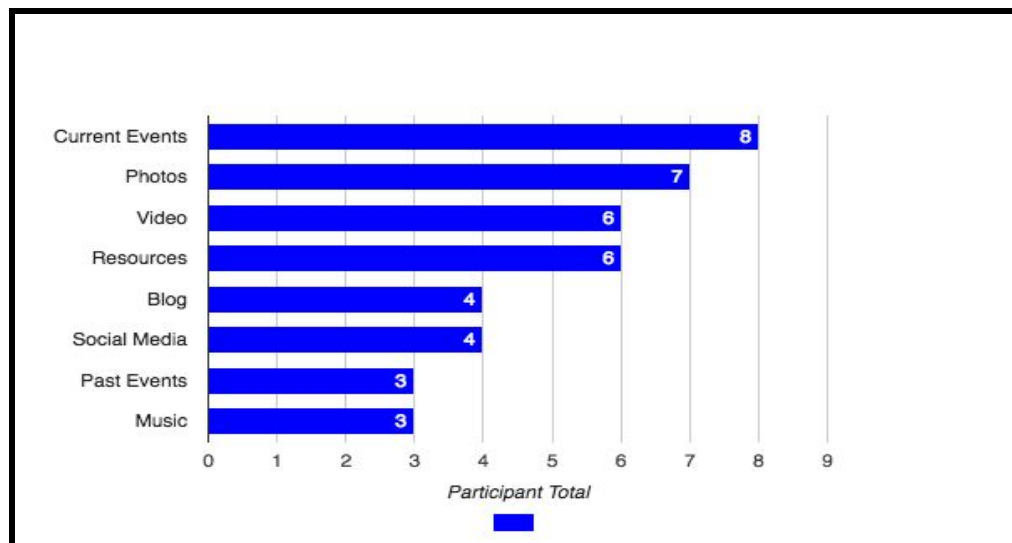


Figure 6. Participants' preferences on content placed on websites

Layout

In round 1 of the usability study, some participants were observed with having a troubled voice in locating the education tab (See Figure 6, Education Tab layout). The education page link opened to a one column page (left screenshot) with photos graduating from PK-12. Participants reacted negatively to this design (See example in Figure 6, Item A and B).

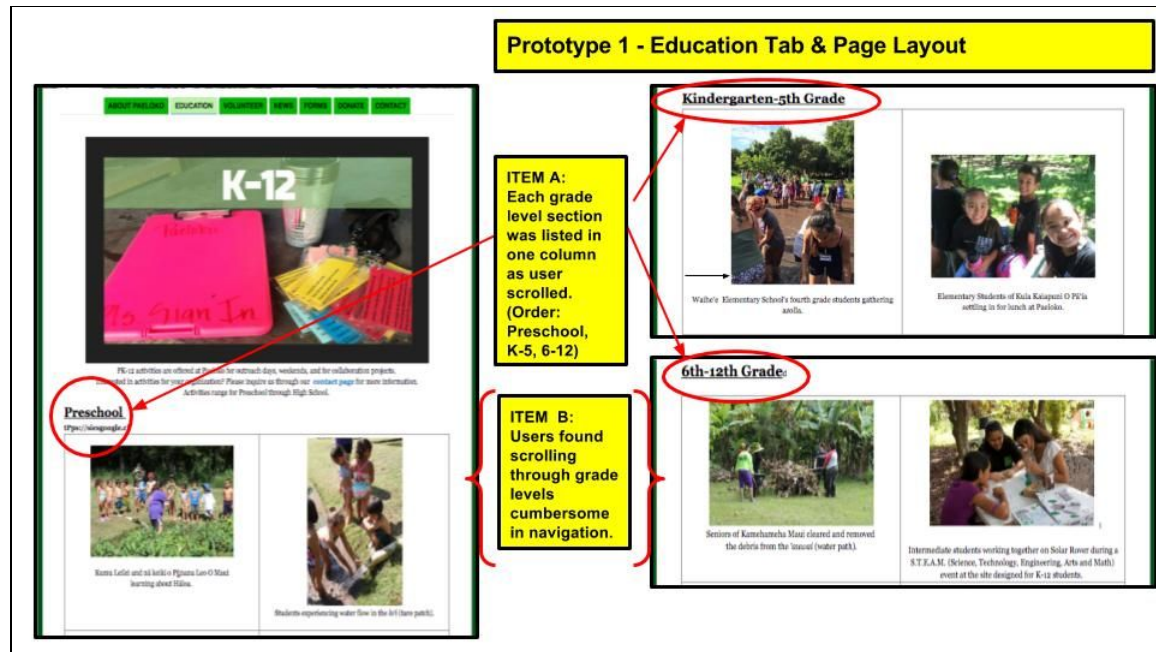


Figure 7. Original layout for Education Tab and Page Layout - Prototype 1

In the second round of iteration, the tab listed as *Education* was updated to read as *Programs*. In Figure 8, Item 7, participants suggestions in the second round also encouraged to separate the grade level sub groups into sub-pages, versus a one-column listing and list the same option on the *Programs landing page*. Overall, 75% of tasks in both rounds were passed by participants based on the layout and changes between rounds.

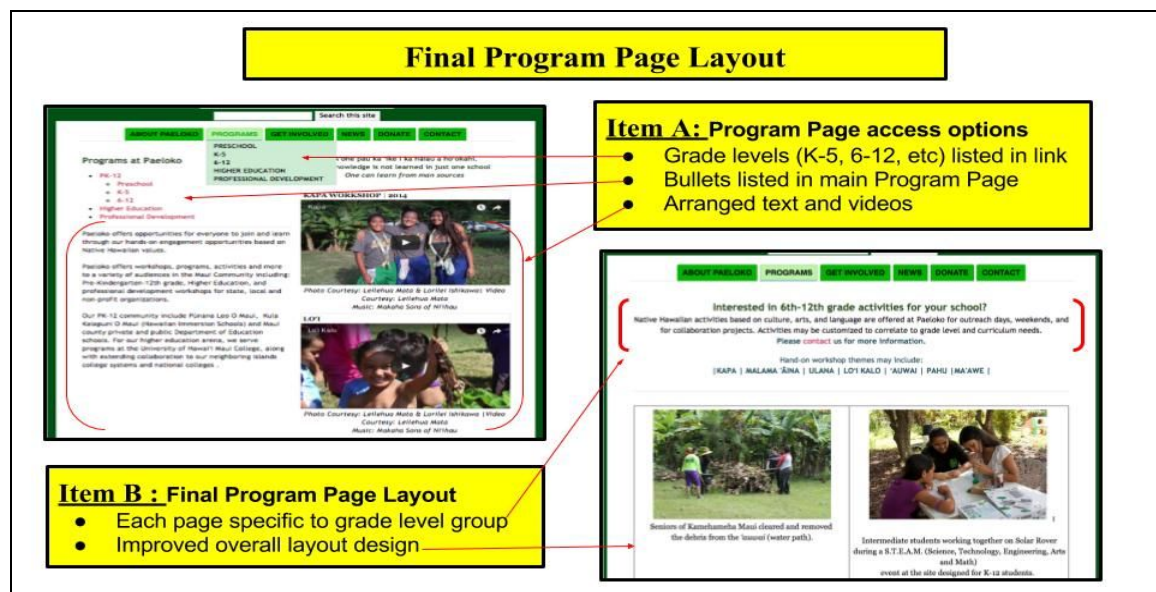


Figure 8. Final Prototype - updated program page with user feedback

Results during both usability sessions were screen and audio recorded. The most positive feedback was came from the the visual aids of photos and videos as users navigated and

commented on the website. Participants stated activities seemed *cultural and personal* to a specific audience served, photos on the site are *colorful and rich*, and the videos were described as having *spontaneity*. The post-survey reflected positive results contributed to user satisfaction (See Table 3).

Table 3.

Positive Feedback on websites from Round one and two (photos and videos)



Discussion and Conclusion

The improved website in each round was well accepted by participants for the simplicity of the website design and ease-of-use. The overall first impression of the header logo in round 1 caused some distraction for participants as they landed on the *About page* due to the logo's centered position, the camouflaging of the search button, and overlapping photo style. Three of the four participants sought more information when they landed on the *About page*, looking for links through the photos and headers. With this observation, I was encouraged to change the homepage header and the layout for PK-12 in round two based on feedback by participants. In round two, user satisfaction increased based on the updated landing web page and layout for PK-12 page design.

The most identifying aspect in round two was the improvement in changing the tab name *Education* to *Programs*. Based on user feedback and observations in round two, changing the term offered less second guessing about choosing the link. Another area of improvement included redesigning the questions in tasks and scenarios versus the website design. Decreasing confusion is pertinent to users to find the information quickly.

Future updates to the online website will include: updating the current site with current photos and videos from an array of audiences and activities, translating the site to 'Ōlelo Hawai'i (Hawaiian Language), and close-captioning the videos in 'Ōlelo Hawai'i (Hawaiian Language) and English.

References

- Beckwith, M. (2016). Ulukau: Hawaiian mythology. Retrieved December 1, 2016, from <http://www.ulukau.org/elib/cgi-bin/library?e=d-0beckwit1-000Sec--11en-50-20-frameset-book--1-010escapewin&a=d&d=D0&toc=0>
- Catherine Fulford. (2014a). *Visual Design Elements (Part 1)*. Retrieved from <https://www.youtube.com/watch?v=aK2jnYSAOb0>
- Catherine Fulford. (2014b). *Visual Design Theory & Research*. Retrieved from <https://www.youtube.com/watch?v=lnfM4Z-W-D0>
- Haile, T. (2014, March 9). What You Think You Know About the Web Is Wrong. *Time*. Retrieved from <http://time.com/12933/what-you-think-you-know-about-the-web-is-wrong/>
- Hedani, S., & Ishikawa, L. (2015). Paeloko. Retrieved December 1, 2016, from <https://sites.google.com/a/hawaii.edu/paeloko/home>
- Zeldman, Jeffrey (2001). *Taking Your Talent to the Web. A Guide for the Transitioning Designer*. Retrieved from <http://takingyourtalenttotheweb.com/Taking%20Your%20Talent%20to%20the%20Web.pdf>
- Krug, S. (2010). *Rocket Surgery Made Easy : The Do-It-Yourself Guide to Finding and Fixing Usability Problems*. New Riders. Retrieved from <http://uhawaii-primo.hosted.exlibrisgroup.com>
- Krug, S. (2014). *Don't Make Me Think! : A Common Sense Approach to Web Usability* (2nd ed.). Berkeley, CA.: New Riders.
- Mershon, P. (2016). 5 Social Media Tips for Finding and Engaging Your Target Audience: New Research : Social Media Examiner. Retrieved from <http://www.socialmediaexaminer.com/5-social-media-tips-for-finding-and-engaging-your-target-audience-new-research/>
- Nielsen, J. (2010, November 1). Photos as Web Content. Retrieved December 1, 2016, from <https://www.nngroup.com/articles/photos-as-web-content/>
- Nielsen, J. (2012a, January 4). Usability 101: Introduction to Usability. Retrieved December 1, 2016, from <https://www.nngroup.com/articles/usability-101-introduction-to-usability/>
- Nielsen, J. (2012b, January 16). Thinking Aloud: The #1 Usability Tool. Retrieved December 1, 2016, from

<https://www.nngroup.com/articles/thinking-aloud-the-1-usability-tool/>

Nielsen, J. (2012c, June 4). How Many Test Users in a Usability Study? Retrieved December 1, 2016, from <https://www.nngroup.com/articles/how-many-test-users/>

Thomson, K., Purcell, K., & Rainie, L. (2013, January 4). Arts Organizations and Digital Technologies. Retrieved from <http://www.pewinternet.org/2013/01/04/arts-organizations-and-digital-technologies/>

Participant Recruitment Email

Aloha [Participant's First Name],

As a current Master's student at the University of Hawai'i Mānoa, College of Education, Online Learning Design and Technology Department, I am seeking your assistance as a *potential* participant to join me in my usability study.

As a requirement to graduate this Spring 2017, my final project will be to conduct a usability study to improve the website for Paeloko, the educational site located in Waihe'e, Maui. The purpose of this usability study is to evaluate user satisfaction and effectiveness of the improved website for educators in learning about the activities performed at the Paeloko physical educational site. Based on your expertise, you are a potential candidate for this study.

Usability Overview

- 3-5 minutes Pre-Survey [Online Form]
- 10-15 minutes testing the website
- 5-10 minutes Post Survey [Online Form]
- Two rounds for testing will be conducted in the Week of January 24 through the Week of February 13.
- Participants will have two options:
 - In-person session at a designated location at the UH Maui College campus
 - Remote session, completed online via Google Hangouts on Air via YouTube Live
- All results of the study will be kept confidential and used for educational purpose only.

If you are interested and available:

- Please complete my [Participant Survey](#).
- Download, Review and Sign the attached ***Informed Consent*** if you agree to participate. Please email the completed form to smata@hawaii.edu or one will be provided upon agreement to an in-person session.

Please note:

- The informed consent will include confidentiality, risks and privacy concerns.
- This is strictly voluntary and any identifiable data will be protected, destroyed, and deleted upon completion.
- The information as indicated on the consent form will be collected for educational purpose and only accessed by me.
- If you have any questions or concerns, please contact me at the number or email listed below

Thank you for your time

Sylvia Mata | (808)214-8011 | smata@hawaii.edu

Appendix B
Participant Survey

Participant Survey

University of Hawai'i - Manoa
A Usability Study on the Paeloko Website

Please complete this survey if you are able or not able to participate in this study. Your feedback will provide me with information to conduct my project. If selected, I will email you a confirmation. Thank you for your time.

My Contact Information:
Sylvia 'Leilehua' Mata
(808)214-8011
smata@hawaii.edu

* Required

Are you 18 years or older? *

- ☐ Yes
- ☐ No

Are you available for at least 30-60 minutes between the dates of January 23 - January 30? (Session may be in-person or remote. Familiarity with Google Hangouts on Air/YouTube preferred for remote sessions) *

- ☐ Yes
- ☐ No

Please select the statement that best applies to you. *

- ☐ I have access to a computer and internet connection and able to participate remotely through Google Hangouts on Air via YouTube Live
- ☐ I am able to participate in the study at a designated location at the University of Hawai'i Maui Campus
- ☐ I am not available at this time to participate, but may be for the next week of available dates.
- ☐ I am not available to participate.

PREFERENCE 1 : Please select a a time during the testing week that is best for you.

	AM 8-11a	Mid 11a - 2p	PM 2-6p	Late 6-8p
Monday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tuesday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wednesday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thursday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Saturday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sunday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PREFERENCE 2 : Please select a a time during the testing week that is best for you.

	AM 8-11a	Mid 11a - 2p	PM 2-6p	Late 6-8p
Monday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tuesday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wednesday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thursday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Saturday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sunday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please note any specific time and day preferences.

Your answer

Name *

Your answer

Email *

Your answer

Phone

Your answer

SUBMIT

Never submit passwords through Google Forms.

Appendix C

Informed Consent

Informed Consent Form

University of Hawai‘i - Mānoa

CONSENT TO PARTICIPATE IN USABILITY STUDY

A Usability Study on the Paeloko Website

Introduction: My name is Sylvia Mata. I am a graduate student in the University of Hawai‘i at Mānoa Learning Design and Technology program. As a requirement to graduate, I am requesting your help through participation in my final usability study. I am conducting a usability study to improve the ease-of-use for the Paeloko websites for

educators in learning about the activities performed at the Paeloko physical educational site.

Overview of Study: For this usability study, there are two options. The first is a remote session via Google Hangouts or an in-person session at a University of Hawai‘i Maui College (UHMC) designated location using a screen and audio recording tool, Google Hangouts on Air or QuickTime Player. For the on-site location at UHMC, a laptop and/or computer device(s) will be required and only you and I will be present in the session.

Participating in this project involves a forty-five (45) minute commitment. The session will begin with a brief pre-survey questionnaire, followed by interview questions. The interview segment will be audio and screen recorded. Interview questions will include questions like, “How easy or difficult is it to locate key topic associated with a specific tasks/scenarios?” The tasks and scenarios will be based on a think-aloud protocol, in which I will ask you to communicate your thoughts verbally as you navigate the site. The session will conclude with a post-survey and short interview. The recording, surveys, and interviews are integral to collect data to support my analysis.

As a reminder, during the think aloud protocol, your honest opinion is valued as it will help me identify deficiencies, and make improvements in order to produce an effective website. Participation in this study is strictly a testing of the site and not you. There is nothing that you can do wrong, in fact, this is probably the one place where you don’t have to worry about making mistakes

Confidentiality and Privacy: Your confidentiality is very important to me. Data I collect as results during the recorded sessions, surveys and interviews will be compiled and used as part of my usability study. Names will remain confidential.

Benefits and Risks: There will be no direct benefit to you in participating in this study. As a participant, you may learn more about usability studies. The results of my project may help me, educators and stakeholders learn more about the website design and benefit the future educational programs at Paeloko. Additionally, there are no inherent risks involved with your participation.

Voluntary Participation: Participation in this project is voluntary. You have the choice to participate or not participate in this study. If at anytime you decide to withdraw, there will be no penalty or consequence.

Thank you for your time. My hope is to educate our community about the educational programs offered at Paeloko and support this program's future.

If you have any questions about the study, please feel free to contact me, Sylvia Mata at 808-214-8011 or by email at smata@hawaii.edu. You may also contact my advisor and instructor, Dr. Grace Lin at gracelin@hawaii.edu. Additionally, if you have any questions about your rights as a research subject, contact the UH Human Studies Program at (808)956-5007, or email: uhirb@hawaii.edu.

If you agree to participate in this study, please sign and date below, indicating that you have read and understand the information on this form. Please return it to me via email or in-person. I will provide a copy for your records.

Signature of Consent

I give my permission to join in the usability study, A Usability Study on the Paeloko Website based on the above provided information.

Please indicate your choice of the following:

☐ Yes ☐ No I consent to a remote audio and video recording for this research.

☐ Yes ☐ No I consent to an in-person audio and video recording of this research.

Printed Name of Participant

Signature of Participant

Date

APPENDIX D REMOTE SESSION INSTRUCTIONS

Test Participant Checklist

For Remote Session only

- ☐ **1. SET-UP TEST** (*Begin 15 minutes prior*)
 - ☐ Technology Checklist
 - ☐ Computer Devices (2) and power cords
 - ☐ Cell phone and power cords
 - ☐ Wireless Connectivity or Hardline connection secured
 - ☐ Run & Check Google Chrome for browser for updates
- ☐ **2. LAUNCH THE TEST**
 - ☐ Preferred Browser: Google Chrome. Go to <http://hangouts.google.com>
 - ☐ Wait for facilitator to send you a call invite.
 - ☐ Accept the invitation.
 - ☐ Click on ‘**Answer**’ to accept the invitation in the event box on your left hand screen which will list “**video call from Leilehua Mata**”. Sometimes, the call may open a new screen on your computer. Please click ‘**Answer**’ to begin.
 - ☐ If you missed the call, there will be a ‘missed call’ notification. I will try a few more times.
 - ☐ If there is a technical problem in the connection; I will email, text, or call you.
 - ☐ Your browser will be redirected to Google Hangouts via Live-YouTube session. This will prompt the facilitator that you are connected to the recorded session.
 - ☐ Review and Test audio, visual, and navigational bars.
 - ☐ Complete a final screen, audio and mic check with facilitator
 - ☐ Verify signed consent form
- ☐ **3. CONDUCT THE TEST**
 - ☐ The facilitator will begin the test with the following:
 - ☐ Link to Pre-Survey via Google Forms
 - ☐ Overview of the Usability session
 - ☐ Begin Usability Test
 - ☐ Short Interview
 - ☐ Link to Post-Survey via Google Forms
 - ☐ Please ask for technical assistance at any time.
 - ☐ Ph: 808-214-8011, Email: smata@hawaii.edu
- ☐ **4. CONCLUDE THE TEST**
 - ☐ Facilitator will notify you of the conclusion of test.

APPENDIX E

CONFIRMATION EMAIL

Confirmation Email

University of Hawai‘i - Mānoa

A Usability Study on the Paeloko Website

TO: [Participant's First and Last Name]
 FROM: Sylvia Mata
 SUBJECT LINE: Usability Testing Reminder & Checklist

Aloha [Participant],

This is a confirmation reminder that you are scheduled for a usability test on:

DATE: [TBD]
TIME: [TBD]
PLACE: Remote Session on Google Hangouts on Air via YouTube Live
 [UHMC - Ho’okipa Building, Wong Room]
 [UHMC - Library Conference Room 3]

ABOUT: *University of Hawai‘i - Mānoa*
College of Education - Online Learning Design and Technology
A Usability Study Session on the Paeloko Website by Sylvia Mata

Please remember to arrive or log-in fifteen minutes prior to start on time. If at any time you would like to withdraw or are not able to participate, for any reason, it is your choice. However, I would kindly request that you please notify me at your earliest convenience for any cancellation or rescheduling.

Thank you for your time,

Sylvia ‘Leilehua’ Mata (808)214-8011 smata@hawaii.edu

APPENDIX F

USABILITY TECHNOLOGY PROTOCOL SCRIPT

Usability Technology Protocol

Sylvia L.L. Mata

University of Hawai'i - Manoa - A Usability Study on the Paeloko Website

Modified from Usability Script- Rocket Surgery Made Easy © 2010 Steve Krug

Usability Test Set-up Procedure for Facilitator (*Preparation 1hr*)

☐ SET-UP TEST

☐ Technology Checklist

- ☐ Computer Devices (2) and power cords
- ☐ Cell phone and power cords
- ☐ Wireless Connectivity
- ☐ Run Google Browser for updates

☐ Instructional Materials and Forms

- ☐ Observation/Data Sheet
- ☐ Task/Scenario List
- ☐ Informed Consent forms
- ☐ Pens and Pencils

☐ LAUNCH THE TEST

- ☐ Use Google Chrome for best results
- ☐ Login with username and password for **Google account.**
- ☐ **Website :** www.youtube.com/my_live_events
- ☐ Click on **Live Streaming Events** in Creator Studio in the left navigation bar
- ☐ In Navigation Bar, click on **Events**
- ☐ In upper right hand corner of frame, click **New Live Event**
- ☐ Click **Create Event**
- ☐ Name Session with Test Date and Time
- ☐ Under Type, be sure Quick(*using hangouts on air*) is checked
- ☐ Event will be redirected to *Event Box Screen*
- ☐ Click on **Start Hangout on Air** to begin the session
- ☐ Agree to connect Google Hangout On Air
 - ☐ *Facilitator: Have Script, Observation Sheets on Hand
- ☐ New Screen will open for Hangouts on Air
- ☐ Test and Ensure Audio and Visual is working
- ☐ When ready, click on the icon **Start Broadcast**
- ☐ Welcome and recite Usability Script
- ☐ Instruct to open icon on desktop to site

☐ CONDUCT THE TEST

- ☐ Follow the Usability Script with the Scenario/Task Sheet
- ☐ Provide technical support as required

- ☐ Remind participant consistently to “think aloud”
- ☒ **CONCLUDE THE TEST**
 - ☐ Direct your participant to stop Screenshare in Google Hangout
 - ☐ Direct the participant to the Post-Usability Survey Icon on desktop.
 - ☐ Thank your participant and ask if they have any further questions
 - ☐ Review archived Google Hangout On Air broadcast on YouTube

☒ **For Remote Sessions**

☒ **LAUNCH THE TEST**

- ☐ Use Google Chrome for best results
- ☐ Login with username and password for **Google account.**
 - ☒ **Website :** www.youtube.com/my_live_events
- ☐ Click on **Live Streaming Events** in Creator Studio in the left navigation bar
- ☐ In Navigation Bar, click on **Events**
- ☐ In upper right hand corner of frame, click **New Live Event**
- ☐ Click **Create Event**
- ☐ Name Session with Test Date and Time
- ☐ Under Type, be sure Quick(*using hangouts on air*) is checked
- ☐ Event will be redirected to *Event Box Screen*
- ☐ Click on **Start Hangout on Air** to begin the session
- ☐ Agree to connect Google Hangout On Air
 - ☐ *Facilitator: Have Script, Observation Sheets on Hand
- ☐ New Screen will open for Hangouts on Air
- ☐ Test and Ensure Audio and Visual is working
- ☐ Click on top navigation bar and add person by clicking on the **Person icon with the + sign.**
 - ☐ Add test participant with email provided
- ☐ **Enter** Email Address and participant will be dialed.
- ☐ Confirm with study participant live broadcast is established.
- ☐ Click on Start Broadcasting, once contact with participant has completed audio, visual and located navigational buttons.
- ☐ Test and Ensure Audio and Visual is working
- ☐ When ready, click on the icon **Start Broadcast**
- ☐ Welcome and recite **Introductory Usability Script**

And now we begin the test....

Introductory Usability Script

Hi, _____. My name is Leilehua Mata, and I'm going to be walking you through this session today.

Before we begin, I will read some instructions from this script to be sure I cover everything we will do today. Today, we are going to do a (remote*) usability study. You will be asked to explore a website to determine whether it works as intended. I'm going to ask you as much as possible to:

- Try to think out loud. An example is, If I ask you to locate a resource book for teachers..., you would say, "To find this resource, I would look at this link first because it states Resources for Teachers.
- Another example is to say what you're looking at, such as 'the yellow highlight signals me to click here...'
- What you're trying to do if you are deciding on where to look and
- What you're thinking as you navigate.

During the study, you will notice that I will be repeating prompts to remind you to think aloud. The usability session should take about 15--20 minutes. We will quickly begin with a pre-survey located on the desktop, the usability session, a short interview, and post survey.

Please remember, the first thing I want to make clear right away is that I'm testing the *site*, and not you. You can't do anything wrong here. In fact, you don't have to worry about making mistakes or hurting my feelings. I'm doing this to improve the site, so I need to hear your honest reactions.

As you know, this will be a recorded session. With your permission granted earlier, I'm going to record the audio and screen activity as you navigate and record our conversation. The recording will be used to improve the site and for educational purposes only.

If you have any questions as we go along, just ask them. Do you have any questions?

***IN-PERSON:** *So before we begin, please click on the icon that state Pre-Survey and begin. Once completed please let me know. This should take less than 5 minutes.*

***PRE - SURVEY* 3-5 minutes**

***REMOTE:** *So before we begin, I will post the pre-survey link in the chat box located in the right hand portion of your screen. Once completed please let me know. This should take less than 5 minutes.*

Thank you. Any questions before we begin the Usability? Okay, Great.

***USABILITY TEST* 15-20 minutes**

Next, Please click on the icon on the desktop named Paeloko. Now please click the icon to share screen. This will allow your audio and screen activity to be recorded. The share screen icon has an arrow coming out of a rectangle screen.

Usability Test Script

Task 1: (Explore the Homepage) 1-3 min max

Be sure **Start Broadcast** is on

This is the homepage of the Paeloko improved website. The site is designed to provide information about the educational site to interested community members, educators, grantors.

First, I am going to ask you to scan and scroll through the page and tell me what you see. If you point your cursor to where your eye is on the page, we can follow along as you look.

Again, please try to think out loud as you go along. You can scroll around with your mouse, but please don't click on any links just yet. As you do so, please **think aloud** as you reflect on the following questions. Feel free to move around this page without clicking on anything yet.

- What do you notice first?
- What strikes you about it
- What do you think about the color, graphics, or photos etc?
- Next, Please describe the options you see on the homepage and what you think they do.
- Lastly, If you were visiting the website, what do you think you would click on first.

When you feel you are completed with this task, please let me know.

Task 2: Satisfaction of Content / Exploring Activities

You are a teacher for 6th grade Science and need to find two outreach activities based on Native Hawaiian practices to be implemented into your curriculum.

You need to find at least two activities.

- Where would you click on and why?
- What are some of the activities on the website?
 - Do you think this is the information you were looking for? Is it adequate?
- Was photo(s) satisfactory or not?
- Were the video(s) satisfactory or not?
- Please rate the level of finding the information?
 - 1 for being easy to 5 being very difficult

When you feel you are completed with this task, please let me know.

Task 3: Navigate to find activities

You are a Personnel Director for the Hyatt and your concierge team is seeking a professional development workshop to implement in the hiring process to assist new hires in learning about Maui and connect them to Native Hawaiian culture.

What kind of workshops are available?

- Where would you click on and why?
- Why did you choose to go that path?
- What other companies have been to Paeloko?
 - What did they do?
 - Was it a lot of people?
 - Where would go for more information?
- Please rate the level of finding the information?
 - 1 for being easy to 5 being very difficult

When you feel you are completed with this task, please let me know.

Task 4: Explore Activities

You work for the University of Hawai'i Maui College. As a Scholarship Program coordinator, will need to implement a volunteer workshop based on Native Hawaiian values. **Where do you find volunteer opportunities?**

- Where would you explore to find this information and Why?
- Where would you go to find out what is required to wear?
- Where would you go to print release forms?
- Please rate the level of finding the information?
 - 1 for being easy to 5 being very difficult.

When you feel you are completed with this task, please let me know.

We are none done with the main questions. And now I have a short interview.

1. On a scale of 1 to 5, with 1 representing very easy and 5 being very difficult, how would you rate your experience during today's testing?
2. Please think back to other online courses you have taken before. Have you ever needed to perform tasks like the ones you did in the usability test today?
3. Compared to your prior experience, would you say that the tasks you performed today were easier or more difficult? Similar or different as you explore on websites. Why?

That's the last question, Any Questions

❑ CONCLUDE THE TEST

- ❑ Direct your participant to click to stop Screenshare in Google Hangout
- ❑ Direct the participant to complete the Post-Usability Survey Icon on desktop.
 - ❑ In-Person Session: OK. Before we end. There is an icon on the computer linking to a Google Form Post-Survey. As a part of my project, please complete this before you leave. It should take less than five minutes.
 - ❑ Remote Sessions: OK. Before we end. Please locate your chat box on the right hand side. I will send you a link to Google Form Post-Survey. As a part of my project, please complete this before you leave. It should take less than five minutes.
 - ❑ Thank you again for your participation. If you have any questions, please ask. Mahalo.

❑ VERIFY RECORDINGS

- ❑ Review archived Google Hangout On Air broadcast on YouTube
- ❑ Review audio and screen activity
- ❑ Ensure video is marked private in settings

APPENDIX G

PRE-SURVEY LINK

Pre-Survey

University of Hawai'i - Manoa
A Usability Study on the Paeloko Website

Questions listed are based on Steve Krug's Usability Methods

How many online courses have you taken?

Your answer

How many online courses have you taught?

Your answer

How many online courses have you created?

Your answer

How many hours a week altogether do you spend using the Internet ? (mail, work, browsing, home etc).

Your answer

What is your internet browser preference?

Your answer

What kind of sites are your interest? (shopping, social media, DIY etc)

Your answer

Do you have any favorite websites?

Your answer

What kind of sites are your interest? (shopping, social media, DIY etc)

Your answer

Do you have any favorite websites?

Your answer

NEXT

Never submit passwords through Google Forms.

Pre-Survey

* Required

Paeloko

This section will briefly cover information about Paeloko.

Have you ever been to Paeloko - the physical site? *

☐ Yes

☐ No

If so, how many times *

Your answer

Have you been to the Paeloko website? *

☐ Yes

☐ No

Have you been to other sites similar to organizations like Paeloko? *

☐ Yes

☐ No

If so, please list the organization(s) name.

Your answer

Check the following that apply to websites that interest you *

☐ Photos

☐ Video

☐ Blog

☐ Literature

☐ Resources

☐ Past Events

☐ Current Events

☐ Music

☐ Social Media

☐ Other: _____

Briefly state one idea of importance about Paeloko to the Maui community. *

Your answer _____

BACK

NEXT

Never submit passwords through Google Forms.

Pre-Survey

* Required

Demographic Survey

Age

- ☐ 18-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55+

Gender

- ☐ Male
- ☐ Female

Areas of Educational Experience

- ☐ K-5
- ☐ 6-8
- ☐ 9-12
- ☐ Higher Education
- ☐ Professional Development
- ☐ Community Organization
- ☐ Pre-K
- ☐ Other: _____

Highest Degree Earned *

☐ Associates

☐ Bachelors

☐ Masters

☐ PhD

☐ Other: _____

Check all areas that applies to your professional background experience. *

	Yes	No	Not Applicable	
Native Hawaiian Culture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Culture	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

[BACK](#) [SUBMIT](#)

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APPENDIX H POST-SURVEY LINK

Post-Survey

University of Hawai'i - Manoa
A Usability Study on the Paeloko Website

Thank you for participating in my usability study.

Please complete this survey based on your experience with this usability study. It is designed to gather information on overall satisfaction and feedback on the website. Questions will be yes or no, multiple choice, short answer or based on likert scale. Thank you for your time.

* Required

The usability test took less than 30 minutes *

☐ Yes

☐ No

Please help us improve based on the scale from Strongly agree to Strongly disagree. *

Strongly Agree to Strongly Disagree.

	Strongly Agree	Agree	Disagree	Strongly Disagree	N/A
The task for the usability study was clear to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The questions during the usability was clear to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The flow of the tasks seemed to follow a logical order.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The facilitator prompted me to think aloud and/or asked me questions while I was performing the tasks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The facilitator asked me questions after I had performed each task.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Post-Survey

Website Use

Based on Steve Krug, this portion seeks information on your experience with the website evaluated. Topics covered are Design Layout, Navigation and Ease of Use.

	Strongly Agree	Agree	Disagree	Strongly Disagree	N/A
The homepage layout was easy to understand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The website is visually appealing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The photos have great quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The photos were sized very well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The videos were sized very well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The videos had great quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The website is clear and organized.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The color schemes are appropriate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The website is easy to navigate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The pages were in logical order.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Number of buttons and links are reasonable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The website is easy to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can use this website without instructions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The website is user friendly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Links are consistent and easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Post-Survey

* Required

Short Answer

What was one thing you liked best about this usability study? *

Your answer

What was one thing you liked least about this usability study? *

Your answer

If you could change one thing about the study, what would it be?
Please explain.

Your answer

Please provide any additional feedback you feel may be helpful
to improve upon.

Your answer

BACK

SUBMIT

Never submit passwords through Google Forms.